

CLAIMS

What is claimed is:

1. A method of manufacturing a vehicle trim component, the method comprising the steps of:
 - a. providing a thermoplastic substrate;
 - b. providing a first material, wherein the first material is different from the material of the thermoplastic substrate;
 - c. exposing a portion of a surface of the thermoplastic substrate to a source of heat such that the portion of the surface of the thermoplastic substrate exposed to the source of heat is melted; and
 - d. positioning the first material onto the thermoplastic substrate so as to bring the first material into contact with the melted surface of the thermoplastic substrate, thereby bonding the first material to the thermoplastic substrate and forming a vehicle trim component.
2. The method according to Claim 1, wherein step (c) includes melting within the range of from about 0.001 inches to about 0.010 inches of the surface of the thermoplastic substrate.
3. The method according to Claim 1, wherein the source of heat includes a source of radiant heat.
4. The method according to Claim 3, wherein the radiant heat is provided by a flash of high intensity heat from a light source.
5. The method according to Claim 3, wherein the radiant heat is provided by infrared light.

6. The method according to Claim 3, wherein the radiant heat is provided by a laser.

7. The method according to Claim 1, wherein the source of heat is fixed relative to the surface of the thermoplastic substrate.

8. The method according to Claim 1, wherein the source of heat is movable relative to the surface of the thermoplastic substrate.

9. The method according to Claim 1, wherein the first material further comprises a thermoplastic layer.

10. The method according to Claim 9, further including exposing a surface of the thermoplastic layer of the first material to a source of heat such that the surface of the thermoplastic layer exposed to the source of heat is melted.

11. The method according to Claim 1, wherein the method further includes the steps of:

prior to step (c), providing a press assembly having a first press half defining a first nest and a second press half defining a second nest, the press assembly being movable between an open position to expose the first and the second nests, and a closed position, wherein thermoplastic substrate is disposed into one of the first nest and the second nest;

disposing the first material into the other one of the first nest and the second nest; and

subsequent to step (c), moving the press assembly to the closed position so as to bring the first material into contact with the melted surface of the thermoplastic substrate.

12. The method according to Claim 11, further including the steps of:
providing a source of heat adjacent to the other one of the first nest and the second nest in which the first material is disposed; and

moving the source of heat relative to the thermoplastic substrate to expose a portion of the surface of the thermoplastic substrate to the source of heat such that the portion of the surface of the thermoplastic substrate exposed to the source of heat is melted.

13. A method of manufacturing a vehicle trim component, the method comprising the steps of:

- a. providing a substrate;
- b. providing a first material comprising a first layer and a thermoplastic layer;
- c. exposing portion of a surface of the thermoplastic layer of the first material to a source of heat such that the portion of the surface of the thermoplastic layer exposed to the source of heat is melted; and
- d. positioning the first material onto the substrate so as to bring the melted surface of the thermoplastic layer into contact with the substrate, thereby bonding the first material to the substrate and forming a vehicle trim component.

14. The method according to Claim 13, wherein the substrate is formed of thermoplastic.

15. The method according to Claim 14, wherein the first layer of the first material is different from the material of the thermoplastic substrate.

16. The method according to Claim 13, wherein the source of heat includes a source of radiant heat.

17. The method according to Claim 13, wherein the source of heat is fixed relative to the surface of the thermoplastic layer of the first material.

18. The method according to Claim 13, wherein the source of heat is movable relative to the surface of the thermoplastic layer of the first material.

19. The method according to Claim 13, wherein step (c) includes melting within the range of from about 0.001 inches to about 0.010 inches of the surface of the thermoplastic layer.

20. A method of manufacturing a vehicle trim component, the method comprising the steps of:

- a. providing a press assembly having a first press half defining a first nest and a second press half defining a second nest, the press assembly being movable between an open position to expose the first and the second nests, and a closed position;
- b. disposing a thermoplastic substrate into the first nest;
- c. disposing a first material into the second nest, wherein the first material is different from the material of the thermoplastic substrate;
- d. providing a source of high intensity heat;
- e. moving the source of heat relative to the thermoplastic substrate to expose a surface of the thermoplastic substrate to the source of heat such that within the range of from about 0.001 inches to about 0.010 inches of the surface of the thermoplastic substrate exposed to the source of heat is melted; and
- f. moving the press assembly to the closed position so as to bring the melted surface of the thermoplastic substrate into contact with the first material, thereby bonding the first material to the thermoplastic substrate and forming a vehicle trim component.